DOCUMENT RESUME

ED 269 646 CE 044 501

AUTHOR Hodgkinson, Harold
TITLE Guess Who's Coming to Work. Occasional Paper No. 116.
INSTITUTION Ohio State Univ., Columbus. National Center for Research in Vocational Education.
PUB DATE 86
NOTE 25p.
AVAILABLE FROM National Center Publications, National Center for Research in Vocational Education, 1960 Kenny Road, Columbus, OH 43210-1090 (OC116--$3.00).
PUB TYPE Viewpoints (120)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adult Education; Career Education; *Change; Demography; *Employment Patterns; *Futures (of Society); *Geographic Distribution; *Labor Force; Population Distribution; Population Growth; *Population Trends

ABSTRACT

Demography is clear about present cohorts; the future will include the same cohorts--only older. However, uncontrollable external forces are going to be dominant in determining America's destiny. To be effective the nation must respond quickly to these changes: the shift from a manufacturing to a service economy, an increasing number of minorities, and increased immigration. Interesting changes are consequently emerging in post-high school people and educational programs. Business has created a large postsecondary education system, corporations run colleges, and a large portion of the middle-age population is being educated. Three demographic factors that must be considered as they relate to the work setting are a potential worker's age, region, and race. Baby boomers are the most important age group, and a middle-aged society is emerging. The Sunbelt is characterized by increased youth populations, and a much higher proportion of the youth cohort is nonwhite. The Midwest is aging rapidly. Blacks are concentrated in the Southeast, Hispanics in the Southwest. The economy is moving toward a work force of a few highly paid executive and professional people and a large group of low-level service workers. The issues surrounding the "declining middle" are vital. (YLB)

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Guess Who's Coming to Work

Harold Hodgkinson

Occasional Paper No. 116

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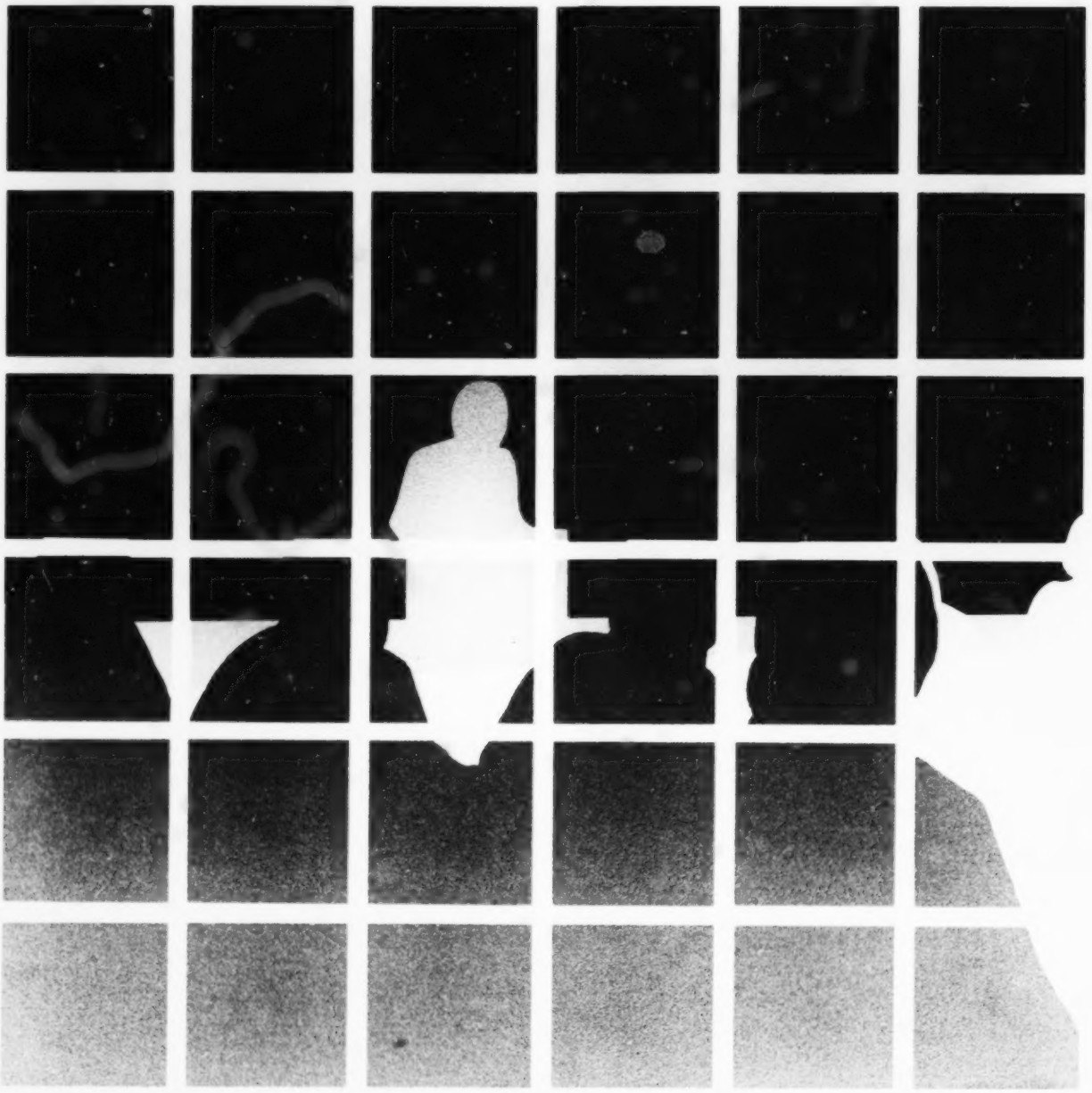

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For further information contact:

Program Information Office
National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

Telephone: (614) 486-3655 or (800) 848-4815
Cable: CTVOCEDOSU/Columbus, Ohio
Telex: 8104821894

OCCASIONAL PAPER NO. 116

GUESS WHO'S COMING TO WORK

Harold Hodgkinson
Senior Fellow
Institute for Educational Leadership
Washington, D.C.

The National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210-1090

1986

FOREWORD

The makeup of this nation's work force is changing rapidly and will continue to do so. Many of these changes are related to demographic phenomena such as bulges in the population, higher percentages of minorities, or an older population. Others are the result of changing social patterns such as more women in the work force, the large number of single-parent families, and early retirement. Still others are the product of regional shifts such as the Frost Belt to Sun Belt migration. Whatever the causes, as our labor force evolves, so do the demands placed on our education and training systems. Schools will be increasingly called on to be responsive to minority students. Adult learners have reached record numbers. In 1984, 12 million people attended colleges and universities in the United States, whereas another 46 million adults were educated by other service providers. These and similar changes make it vitally important to know "who's coming to work."

In 1975 Harold L. Hodgkinson was appointed by President Ford to be Director of the National Institute of Education (NIE), an agency of over 350 staff and an annual budget of $70 million. Prior to this, he served as Project Director in the Center for the Study of Higher Education at the University of California, Berkeley, and Dean of Bard College and Dean of the School of Education at Simmons College, Boston. Dr. Hodgkinson served as President of the National Training Laboratories from 1979 to 1983, and later joined the Institute for Educational Leadership as a Senior Fellow. He earned a doctorate from Harvard University, has held a variety of editorial posts, and has authored numerous books and articles.

The Ohio State University and the National Center for Research in Vocational Education are pleased to present Harold L. Hodgkinson's paper "Guess Who's Coming to Work."

Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

GUESS WHO'S COMING TO WORK

I have a simple thesis that I want to explore with you. I'm not a futurist. I'm a presentist. If we look carefully at the present we can find out most of what we need to know about the future. Most of us don't spend too much time looking carefully at the present. What we're going to be doing for a while is looking carefully at the tracks, the signs, the clues, that we find all around us as to what will happen in the future, without resorting to a crystal ball. Most of the time we call this demographics.

Let me begin in true academic fashion by giving you a short test. There are six questions to this test:

(1) How many people now living in the United States are over 100 years of age?

(2) How many people now living in the United States are over 85 years of age?

(3) What percentage of super market shoppers are male?

(4) What percentage of people over 65 exercise regularly at (least once a week)?

(5) How many black mayors are there in the United States in 1984?

(6) How many households are there in America in which the woman of the house makes more money than the man in the house?

None of these questions have anything to do with the future. They are out of the 1980 census. (U.S. Department of Commerce, Bureau of the Census.) The fact that the answers are so interesting indicates that we can learn a lot about the future. The answers follow. First, 30,000 people in the United States are over 100 years of age, a statistic that will climb to 100,000 by the year 2000. Every week 210 people celebrate their 100th birthday.

Second, interesting for me is the fact that 2.2 million people are over 85. Almost 50 percent of them voted in the last presidential election. Which presidential candidate looked carefully at that million vote margin to see whether he could appeal to them in terms of their interests, their values, their hobbies, what they like to eat, and what they do on vacations? We know little about this group of 2.2 million people. There is almost nothing known even about their food preferences. You would assume that somebody, especially the fast-food people, would be interested in that subject. Third, 40 percent of supermarket shoppers are male. Fourth, 25 percent of the people over 65 exercise at least once weekly. They do not jog because jogging is not good for people over 65.

Fifth, there are 247 black mayors in the United States and 5,600 black elected officials. American politics has been changed forever by the new establishment of a large, politically sophisticated, well-educated, and well-endowed black middle class. We don't pay much attention to it. There aren't too many surveys done of it, but it is there. As we look carefully, we can say some things about these demographics that might be helpful to us as we address the issue of who's coming to work.

There are also over 3,000 elected Hispanic officials in 1984. The Hispanic population is growing more rapidly than the black population. By the year 2000 we will be a nation of 47 million Hispanics, 44 million blacks, and an uncounted number of Asian-Americans because their immigration rates haven't stabilized yet.

Demography is clear about what will happen to the cohorts who are here now. All they have to do is get older, and we have the future. The only thing you can't predict completely is immigration. That's the one x factor in the whole business, and that's why I can't tell you how many Asian-Americans we'll have at that time. There were 3 million plus in 1984, representing great diversity.

Sixth, interestingly enough, there are 6 million households, according to the 1980 census, in which the woman of the household makes more money than the man. We have a large number of households (almost 20 million) with a single occupant. The single largest factor is that women are being promised more and the second largest factor is that many men seek part-time work by the time they get to be 55. The hearth has a certain amount of appeal to the 55-year-old white male who has worked very hard and wants a little chance to taper off. In European nations, as you know, you do not retire all at once. By and large, you are allowed a gradual cessation of work while you build up your repertoire in other areas. We're one of the few nations where at 65 presumably your employment is ended, although actually many people don't retire that way.

Some pretty clear projections can be made about what we need to look at in the world of work just by looking at the answers to the questions. We have one advantage: our awareness of the fact that external forces we don't control are going to be dominant in determining our destiny, and that the speed with which we respond to these changes will have much to do with our effectiveness.

Consider the case of Federal Express. Federal Express now dominates a business that will be obsolete in 6 years. What business is this? Overnight delivery of paper mail. Fifteen percent of all business mail delivered in the United States today is delivered electronically. This number will double in a decade. I have on my home computer a system that allows people to send me messages through the Source and Compuserve. A message is delivered to me in one quarter of a second and I can confirm instantly whether I have any questions about it. I can respond to it instantly. The cost of a "letter" is about $.35 this way. Federal Express is not in that kind of system; therefore, its main enemy is probably not Purolator Courier, but AT&T. The reason for that is AT&T owns the lines that Federal Express is going to have use if it wants to be competitive in the electronic mail business.

Why have corporations changed their planning strategy from a very small amount of planning time devoted to externalities, to a much larger one? Companies such as Federal Express used to have a planning cycle that was 90 percent internal and 10 percent external. Federal Express now feels that 70 percent of planning should be internal and 30 percent should be looking outside the corporation to determine what is happening in the environment and how to react to it quickly and accurately. Most of the Fortune 500 companies now have some type of standing task force called the Issues Management Committee (or a similar name) that addresses issues management. Through this structure, information about changes in the environment are fed back to the company for rapid decisions. In addition, non-profit organizations such as the United Way have excellent scanning systems in place.

Consider for a moment a satellite photograph of the United States at night. The first thing one notices is population densities. When you pick up the newspaper today, you read that everybody is moving to the Sunbelt, but if that's true they forgot to turn on their lights at night. It's very clear that the concentration of lights is not in the Sunbelt. Most of the change, however, has been to the Southeast, and in terms of percentage of growth, that part of the Sunbelt is now largest.

The census did us a big favor the last time we changed our watches from daylight savings time in 1984. It told us what percentage of the population lives in each of the four time zones. The four time zones are about equal in size geographically, but half of the population of the United States lives in the eastern time zone and 30 percent lives in the central zone. Eighty percent lives in those two zones. Five percent of the population lives in the mountain zone, although they get about 90 percent of the publicity. Fourteen percent inhabits the western time zone.

However unlikely, let us say the percentage of the American people living in the mountain time zone doubles to 10 percent. It is still a relatively small number. When you read that the population of Wyoming is up 35 percent in the last 5 years, the 35 percent increase in the population in Wyoming is still very few people.

Our satellite picture also tells us that Americans love to live near water. About 60 percent of the population is within 100 miles of an ocean or a great lake, which helps if you want to sell things to people.

What you see in the picture also is not New York, but Bos-Wash, or Boston-Washington. Another one San-San: San Francisco to San Diego. Third is Chi-Lo: Chicago to St. Louis. The fourth is Cleveburgh: Cleveland to Pittsburgh. About 60 percent of the American people live in those four "cities." One of the interesting things about them is the relationship between densities and efficiency. One of the reasons that transportation of people, things and ideas is so rapid and relatively efficient in Bos-Wash is because it *has* to be. Why does it have to be? The number of people who depend on those systems working well is enormous. The reason the Japanese are so efficient is not because it comes that way in their genetics. It is because with those numbers of people, you simply *have* to be efficient. So, with high densities goes a certain propensity toward very high levels of efficiency as well.

Another audit of the demographic make-up of America is Joel Garraux's (Houghton Mifflin 1981) wonderful book called *The Nine Nations of North America*, which has turned out to be the marketing bible of some American corporations. Garraux says that if you want to sell things to the people in the Pacific Northwest, you should not use the same ads that you use to sell to Hispanic Americans. Similarly, those as will not work in the Great Plains or in the Eastern Foundry. For each of these "nations" there is a value system, and a sense of time—past, present, and future. There is a notion of loyalty, and a feeling about recreation and having a good time. It is obviously very different as you move around the country. For example, the 1984 fall Gallup survey pointed out that 43 percent of the American population think they are going to heaven. In the Midwest, however, 70 percent think they are going to heaven, but in California it's only 20 percent, which tells you something about how people spend their time, and where they think they're going. *The Nine Nations of North America* has a lot to do with work, who's going to work, what kind of work people enjoy doing, and more.

Another little audit of a system might include the pride and joy of Washington, D.C., our metro system. It's a hub and spoke system, designed so that you can live in a suburb and work downtown. Ridership on these systems is declining about 3 percent a year, for one very good reason. In the Washington area 55,000 new jobs were added in the last 8 years. Of the 55,000 new jobs, 40,000 were added in the various suburban areas outside the city. The system was designed to take you from our house in the suburbs to downtown where the federal government is. What has happened, of course, is that the federal government basically is about the same size, but the number of people who feed off it, the lawyers, the psychiatrists, the consultants, the engineers, and so forth, are all working around the edges. In Washington, D.C., 30 percent of the commuters are what are called lateral commuters. They live in one suburb and work in another. The nature of work in Washington, D.C., is going to be fundamentally transformed by that simple fact.

As we shift emphasis from a manufacturing to a service economy, more and more changes like those in Washington, D.C., will occur. You don't need to be near water. You don't need to be near enormous quantities of energy to do the kinds of things that most people do in American life today. If you wonder when you go to Washington, D.C., Chicago, St. Louis, or Detroit why it is that at rush hour the streets are equally crowded with cars going both ways, that's the answer. They are not all going into Detroit to work, they're going from Dearborn to Livonia because they live in Dearborn and work in Livonia. In fact, the Washington metro is an interesting example of a perfect system designed for the wrong use.

Continuing with a metro analogy, we have an oversupply of elementary and secondary schools in the Northeast. We are building them as fast as we can in the Southwest. As a matter of fact, we have enough schools in the U.S. It's just that they are located in the wrong places. This suggests, I think, why we have to look carefully at demography because it will tell us these things in advance. The planners of the metro system were not stupid. It's just that two decades ago when this system was put in place, the trend toward commuting had not become visible. Once it started to become visible—that people lived in one suburb and worked in another—there was not enough time to rebuild the metro so it could look like a spiderweb with some little intersecting lattices or branches.

The media report that violent crime in the United States is down significantly, more than it has been for a long time. Many assume this change is due to the influence of the Reagan administration. Actually, it has to do with the fact that violent crime is committed by teenagers and they are declining in numbers. When superintendents want to pass bond issues they usually appeal to the traditional family, which has a working father, a housewife mother, and two school-age children. In 1955, that would get bond issues passed, as it matched 60 percent of American homes, but in 1980 only 11 percent of the households in America have a working father, a housewife mother, and two or more school-age children.

As we look more at the family of 1980 we can begin to see some of these changes. Fifty-nine percent of the children born in 1983 will live with only 1 parent before age 18. That means a child born in 1983 who lives with both parents until age 18 will be an unusual one. A majority of children will have the experience of living with a single parent. Twenty percent of children are born out of wedlock, and that is a great increase over previous years. Teenage pregnancies number 50,000 a year, are becoming an enormous drain on resources, and are producing young people for whom there will have to be much social reconstruction in order to help them function well in a society. Of every 100 children born in 1983, 40 are born to parents now divorced, 5 are born to parents who are separated, and 2 are born to parents, 1 of whom will die before the child reaches 18. About 4 million children are now in blended families in which children from several marriages are trying to get along in the same household. This is creating some very interesting demands for lawyers.

In addition, architects are getting more and more requests for houses without family rooms, and houses that can be divided up into rooms for two, three, or four different children, depending on the month of the divorce settlement. These children transfer from house to house. They do not live in the same house all year long. That creates some very important changes for school systems and for the legal system.

As far as race is concerned in the family, black married couples have done very well. As I began by saying, there is a black middle class that is very well established. But there is an increasingly smaller percentage of black households. As a result, the black middle class is distancing itself from other black households in a way that I think is a matter of concern. Furthermore, 70 percent of all poor black families in 1981 had a female head. When Jessie Jackson said that poverty in America is a female thing, he was right.

We are finding that an increasing percentage of the birthrate in the United States is nonwhite and by the year 2000 we are going to be a nation of 44 million blacks and 47 million Hispanics, plus a large number (6 million or so) of Asian-Americans. So when women enter the work force, two things happen. When you have the dual-earner couple you have the new rich, and when the single woman is trying to maintain a family you have the new poor.

If we begin to audit what's been happening in schools, we can see one reason why colleges have been doing so well. The characteristics of those who that graduate from high school have shifted remarkably in the last few years. In 1900, only 10 percent of all youth graduated from high school. By 1950, 25 percent of the blacks graduated and 56 percent of whites, and by 1978 it was up to 75 percent for blacks and 85 percent for whites. Any psychometrician worth his or her salt will tell you that if instead of creaming 10 percent of a population, you open colleges to two-thirds of the population, you'd expect achievement scores to drop 50 percent. Even our fondest critics, of whom there are many, haven't proposed that this has happened. As a result of more people completing high school, more young people have the opportunity of going on to colleges. Now over 50 percent of the youth cohort at age 18 can assume that they'll be able to go on to college.

I firmly am of the opinion that with 26 states now passing mandated competency standards and seldom providing tutorial or remedial money to help those who don't pass on the first cut, the percentage of high school graduates is going to decline in the future. That has a huge implication for the workplace.

State retention rates to high school graduation vary greatly. Minnesota leads the country with 86 percent of its youth force graduating from high school, and Mississippi has 61 percent. This also means, however, that in Mississippi 39 percent of the young people are a net loss to the state. That is, they will take away more from the state in terms of services than they will contribute back to the state in terms of taxable revenue. Without a high school diploma, your chances of getting a job in Mississippi are very low. In Minnesota, on the other hand, only 14 percent of young people represent a net loss to the state. For the other 86 percent the service money they take away will be paid back 2 or 3 times in the form of taxable income.

With a high school diploma you at least have a chance of getting a relatively good job. But notice that the national average for high school graduation has slipped from 75 to 72 percent, through 1981. It has slipped a little bit since then. A person once told me, "That's terrific that smaller percentages graduate from high school, because that means that the quality of education is going up." I think that for many Americans, quality means exclusion. If eight people apply to a college and only one gets in, that's quality. What they do for the one who gets in is of little concern. If we're excluding people from high school graduation, it automatically means in the minds of some people that the standards are going up. Others have said that if we really wanted to raise test scores in schools we would simply kick out the handicapped kids and kids from low socioeconomic backgrounds. I find that not only disquieting, but somehow un-American. I find this attitude across political parties. This is particularly disconcerting now that we've discovered that programs such as Head Start have helped students considerably. For example, students who took part in Head Start who are now 19 years of age are really doing very well. With a $6,000 investment in Head Start, you save yourself about $20,000 in later services that are not needed for that group of kids. There is no question that this is a very good social investment.

Births were actually less than deaths for the last decade, but our total population went up. How did that happen? It happened because of the huge increase in immigration. Whenever totalitarianism seems to be rising in the world, the immigration group coming to the United States begins to increase very, very rapidly. Fourteen million immigrants now live in the United States, as many as in 1920.

Another issue is the current immigrants to the United States. They did not come from Italy, Poland, Czechoslovakia, and Germany, but from South America and Asia. These groups coming in have a different set of dynamics than those in the 1920s and 30s when we had to socialize a large number of people to a new culture. Indeed, it took three generations in many cases for Italian immigrants to be considered Americans rather than immigrants. The interesting question is how many generations we will give these new arrivals from South America and Asia before considering them Americans. This is called *intergeneration equity*. When a Taiwanese person comes to the United States who doesn't speak English, how accepting and judgmental will we be of that person's descendents? How much assistance will we offer, particularly educational assistance, before we except the Taiwanese to be self-sufficient Americans?

In putting together some of the demographic material with some of the new studies on the total educational system, some very interesting changes emerge in the people and the kinds of educational programs we now have after high school. For example, there are 12 million students in colleges and universities. The total investment in their education is about $40 or $50 billion per year.

In business and industry, 10 million workers are taking 18 million courses a year at a total cost to the companies of at least $40-$50 billion per year. The American Society for Training and Development (ASTD) estimates a high end cost of around $200 billion.

Three quarters of those courses are offered in house by the company's own education and training staff. They are not farmed out to colleges and universities, community colleges and proprietary schools except for perhaps a quarter of the total courses. So here we have a second educational system built more or less by default, as large as the official postsecondary network. Nobody asked businesses to create this system. They did it out of need.

The government has 15 million workers and half of them engage in some form of education every year. The proprietary schools serve 3 million students, and the military trains 2 million students, dependents as well as the military forces themselves, with programs on every military base in the world. Other nonprofit organizations increase the figures even more such as United Way, which runs a big management training center in Virginia for 7,000 managers. This gives a sense of how it is that America is becoming such an education-intensive society.

Another evidence of this trend is the fact that 14 colleges are run not by boards of trustees but by corporations. Twelve of these corporate colleges offer their own degrees, and the degree is accredited by regional institutions. These are the same regional accredting associations that accredit The Ohio State University. The Rand Corporation, for example, has offered a doctorate in policy science for many years now and nobody slights that program. Some businesses are opening their own colleges, offering their own degrees, and in many cases seeking regional accreditation.

A second trend is more significant in terms of numbers. There are about 200 corporations that offer a degree program in cooperation with a college or university. In Ohio, for example, the Dana University degree, run by the Dana Corporation, one of the world's largest makers of transmission parts, is offered jointly through the University of Toledo and Bowling Green State University. The educators come to the workers on the site. The workers seldom need to leave to go to Bowling Green. Similarly, employees with Holiday Inn are allowed a degree through Memphis State University. Workers with IBM may receive a degree through IBM's Systems Research Institute, which works through The State University of New York (SUNY).

As you look at higher education in the context of demographic changes, we are now engaged in an enormous amount of education of our middle-age population. Some things are happening in terms of collaboration that just never happened before. Business really believes with its heart and its pocketbook that human capital is the crucial difference. We're beginning to invest in human capital, and can look at the return on that investment. Some say that a dollar invested in human beings gives you a higher return than from either the dollar invested in facilities or the dollar invested in equipment. Business has fundamentally changed its view. The education of its workers has become such an important matter that if we in education can't do it, businesses will do it anyway because it has to be done.

America in the 1980s is clearly in a period in which corporations are giving all kinds of things to educational institutions. They want the best workers they can get. They often don't like to give money to educators, however, because money makes the recipient more dependent. Instead, they prefer to donate services or products and equipment. For example, if you need a catalog and you happen to be located in New Jersey, which is where Prudential is, they'll print your catalog for free. They'll mail it for you for free. Of course, they charge the cost of the completed catalog off as a charitable deduction. They'll do the same thing with audio-visual materials. Businesses, then, are less interested in giving money alone to educational institutions than they are interested in giving human and physical resources. "Resource raising" is becoming quite important.

The responses institutions are making to this change are quite striking. In 1950, if you wanted to be educated past high school, it meant college. That was the only option. If you wanted to borrow money, you went to a bank. For basic research, universities were the place. For a problem with your health, you went to a hospital. Today, however, we have a vastly disaggregated market in all four of those areas. In education, one can join the military and get a degree while serving in the Armed Forces. You don't need to leave the service and establish state residency anymore. There are some five labor colleges operated by labor unions in the United States that actually offer degrees. In finance, you can borrow from a bank, but Sears is the number one money lender because it has been thinking seriously about what families want to do with money. Two years from now, when Sears has a complete comprehensive family management package. I think most people will realize how superior its service is to that of the typical bank.

Although this illustrates how organizations and companies are crossing old boundaries to compete with one another, another whole new view of "smokestack" economics suggests that businesses that once competed with each other in many cases are going to start cooperating with each other. Think of the General Motors-Toyota announcement that they are going to build a new car together. That's partly because they can't afford to compete—a brand new view of this situation. Many small colleges, for example, are pooling library resources so that they can have a university-quality library instead of five little liberal arts college libraries; yet they still compete for admissions. Many service agencies are pooling their business and accounting services and partially merging those facilities so they can continue to offer individualized services. Our changing environment raises a whole new set of issues, as we see by these illustrations. This change is exemplified by the question, when do we cooperate with people and when do we compete with them?

Three demographic factors we must consider as they relate to the work setting are our potential workers' age, region, and race. For example, baby boomers are the most important age group in our society right now. From 1946 to 1964, an 18-year period, we hatched 72 million people. The European nations had a baby boom after World War II also, but theirs did not reach the magnitude of ours. Baby boomers are now reaching age 40, and these are the people who have redefined every social institution they have encountered as they aged. By the 1990s, the baby boomers will

reach age 50, and by the year 2000, the baby boomers will enter the 60-year-old age bracket and begin to retire. I don't see that as just an economic issue. I see it as a demographic issue as well. The only question to be asked is how many people will there be taking money out of our economy and retirement systems and how many people will be putting money in? By 2020, more will be taken out than put in.

Consider how large the baby boom cohort is and how dominant those people are in terms of their concerns. American society has never been able to ignore them nor will it. It's just too many people. For every decade, the baby boomers' concerns have been all of our concerns.

The baby boom produced is an enormous group of people, and as a result, they are going to make our lives entirely different. Here, for example, is a statement that cannot change: We had more people over 65 than teenagers in 1983. That fact cannot be changed. But the consequences for a society that's prided itself on youth and all its symbols, physical work, energy, and conquering the frontier will be very great.

We are becoming a middle-aged society in fact and in attitude. When you look at young people in the high school years who are now favoring President Reagan, and whose positions on many issues are becoming very conservative, they are simply reading this trend more rapidly than almost anybody else. Because a large percentage of the population is middle aged, we will find more people espousing middle-aged views.

Smokestack economics is experiencing a rapid decline. There is a wonderful new book by Kuttner called *The Economic Illusion* (Houghton Mifflin, 1984), that describes the nature of this shift from manufacturing economy to service-based economy. Manufacturing is doing what farming did—that is, going to fewer workers, resulting in higher productivity. We had 12 million people who were farming in the country in 1910. Today, we have 3 million, but the 3 million produce more than twice as much food. The parallel to manufacturing will be a smaller number of people with a much higher yield. Jobless growth is the name of the profit game.

At the same time, we are beginning to find some interesting developments in a middle-aged society. Extending mental capacity is clearly a new agenda, just as we tried to extend our physical capacity through the forklifts, cars, and other equipment that enable us to increase our strength and speed. We've now moved from trying to extend the muscles in the skeleton to trying to extend the mind—a very interesting set of issues. Services are going to dominate the world of work, but what kind of services?

As our population ages and develops with more defined needs, many corporations are going to begin providing services to meet those needs. Scott Foresman, for example, is one of the largest manufacturers of basal reading texts, but it has a division called the Lifelong Learning Division. The economy discovered some years ago that 20 million American adults don't know how to read English. They took their basal readers, took out the pictures of bunnies, zebras, and tigers and put in pictures of adults doing adult things. Lifelong learning is now a profitable division at Scott Foresman. That's an example of how a company can reorganize itself and create some new jobs to meet a new need of a rapidly aging population.

Births are up slightly but not birthrates (per thousand females). The heyday of the baby boom in 1957, when we had 122 birth per 1,000 eligible females, is over. The problem with birthing 70 million people in 18 years is that all want the same thing at the same time, which is the irony and the tragedy of the baby boom. I was born in 1931. Almost nobody else was. My life has been walking into half-empty institutions and being greeted with open arms. From the time I went into kindergarten, there has seldom been a time when I have gone to any kind of institution or association

and been told, "Sorry, we're all full." There has always been room for me. But for my baby boom students at The University of California at Berkeley, that was not the case. The tragedy of the baby boom can be seen in the recent comments of one of my students. We were talking about how lucky he was to get into Berkeley, because it was very competitive. He said, "Yes, that was lucky," then paused for a minute and said, "But you know, that will be nothing compared to getting into an old people's home when I'm 75." The truth is that one of the factors that determines your life, along with race, sex, and social class, is the number of other people who were born the same year you were.

Members of the baby boom generation have had a few babies of their own, hence, elementary school populations are beginning to increase slightly. The middle grades will increase by about 1986 and the high schools by about 1992 or 1994 (except in the Northeast where these increases will never happens at all). If you look at the high school graduates for the country today, there will be a decline of about 26 percent by 1994. If you look in the Northeast, the decline pushes 40 percent and in the 6 sunbelt states there is no current decline at all. That again suggests by 1998 there may be a little increase in applicants for the college freshman class.

The Sunbelt is characterized by increased youth populations, new jobs, corporate headquarters, political clout, and increased populations of minorities. One of the seldom discussed but terribly important facts is that a much higher proportion of the youth cohort in the Sunbelt is nonwhite.

The Midwest population is aging rapidly, mainly because youth are moving away. Blacks are heavily congregated in the Southeast whereas Hispanics are located heavily in the Southwest. In this "action zone" we have big increases in young minorities. In the Southeast and Southwest we have young minorities, a very heavy percentage of the youth cohort, with higher levels of education who are going to be looking for jobs.

The percentage of increase among these minorities cannot be overemphasized. The average white female in America is 31 years of age, almost moving out of the childbearing years. The typical black female is 25 years of age, whereas the typical Hispanic is 22. Who's going to have the most children?

Today, we find in Texas, for example, that 46 percent of the public school students are minority and in Arizona, 33 percent. In New York, it's 32 percent, in Maryland, 33 percent, and as we look at our largest city schools, it's clear that we have a "minority majority."

I've tried this year to influence eight state legislatures on this issue with very limited success. Nonwhite young people form such a large percentage of the cohort that whites are now becoming dependent upon them. In Texas, where 46 percent of the youth are nonwhite, if they all fail to get a good education and fail to get good jobs and go on welfare at 18 and stay there until they die, the chances of there being enough money for that, plus social security trust funds for white retirees, are poor. There isn't that much money in the world.

For the first time, the fate of whites then is inextricably locked into the fate of minorities. This is not *noblesse oblige*. It isn't Democratic Party rhetoric. It's sheer self-interest. As whites we ought to cheer when big urban schools with heavily black populations do well. It's in our best interest that they do well. I think it will be awhile before this begins to be understood.

Our scenario in the action zone has young minorities as an increasing percentage of the youth cohort looking for jobs. They are going to be a very high percentage of the entry-level work force,

probably 40 percent. The entry-level work force between now and the end of the decade will decline in size and will become increasingly female and minority. The media have put an enormous emphasis on high-tech jobs that are growing rapidly in terms of the *percentage* of growth. If you look at those carefully you have to realize that if you have one job and add another job to it you have a 100 percent growth rate, but you only have two jobs. As a result of this kind of hype, the Education Commission of the States came out with a very interesting paper called *The Information Society* (1982) in which it said that every high school graduate would have to have a set of very sophisticated skills in order to get any job in an increasingly high-tech world. A very important thing is that, although the rates of increase are very striking in these areas, if you look at the total number of high-tech jobs it is less than 1 million although our economy is going to generate 21 million new jobs by 1990.

What are the new jobs that we are generating if they are not high tech? I wish it weren't this way but it is. We turn out six nontechnical jobs for every one remotely connected with high technology, however you want to define it. This list includes janitors, nurses' aides, salesclerks, cashiers, waiters and waitresses, general clerks, professional nurses, food preparation workers, secretaries, and truck drivers. With the one exception of professional nurses, there isn't a high-tech job in the lot. A key question for us in educational pursuits is what kind of an education do these people need? What are the college graduates supposed to do when they find that the jobs earmarked for them do not require a college education? The Bureau of Labor Statistics says that 20 percent of recent college graduates will be in that situation.

An important thing is going to happen. The economy is moving from a work force that had a majority of people in the middle who were well paid and moving ahead, to a work force in which we have a small number of high-paid executive and professional people at one end and a large group of low-level service, clerical, part-time, and female workers at the other—and nothing much in the middle. It hasn't happened yet. We are about a tenth of the way, but in 10 years it's going to happen unless we do something about it.

For example, General Motors now hires fewer people than McDonalds. Think of the work at General Motors—almost everybody is in the middle-income range. The average salary must be $18,500. Think of who works at McDonalds—the franchisee, the manager, and no one else but the poorly paid counter help. Think of Federal Express: 140 directors and everybody else is a courier. Think of Apple Computers with that amazing line in the Fremont (California) assembly plant where only 90 people make the Macintosh computer, and you realize that Apple doesn't want a horde of either high tech people or assemblers. The company wants a small number of engineers, programmers and people who can do automative robotics, and it wants a few packers, craters, shippers, and clerks—and that is it.

The worst case scenario will occur for the young minorities who are often the majority of youth. California has a minority majority in its elementary schools now. These young people will go on to acquire a lot of education, a lot of clout, and a lot of aspirations, but the job market will be offering the same jobs their parents got with a third-grade education, and that is simply not designed to increase feelings of loyalty, benevolence, or well-being.

The very important issue of blue-collar retraining, especially in Ohio, Indiana, Michigan, and Illinois, is partly a conversion of a lot of people to a service-dominated economy. Most of the new jobs are going to continue to be in services. What we have not yet learned to do is to develop new kinds of service jobs that will be profitable and well paying. Most of the service jobs at the present time do not fit that description. We do have an incredible ability in our society to create jobs, especially cosndiering the 600,000 small businesses that start every year. About 40 percent of all new

jobs are created by small businesses, not by Fortune 500 companies. I'm not saying that there won't be some jobs in high technology. These will be the emergent careers, but if high technology accounts for 2 percent of the new jobs in the country I would be surprised. We are talking about 500,000 cashiers' jobs every year. We are simply not going to need 500,000 fiber optic specialists in the next few years. In terms of the creation of new jobs, the transition that we are going through has been made terribly clear.

There was a time, from 1880-1940, when we were involved in phase I products in America, that is changing raw materials (iron ore) into refined products (steel). Then after World War II we moved to phase II, e.g., turning steel into cars. Then about 1965 or 1970 we began phase III, customized products. Production processes are very uniform in the first two phases. Every item is about the same. When you get to the third group you don't produce the same thing for every client. But, as we went from the area of initial production, so did Germany, England, Japan, and France. Later, as we moved down to the second phase after War World II, who came in to take over the molded-rubber tennis shoe business? Korea, Hong Kong, Singapore, Taiwan, Brazil, Spain, and Mexico did. Now what has happened is that we all have moved down another notch. We are in phase III, and the countries just mentioned are in phase II. Who makes your molded-rubber tennis shoes today? Sri Lanka, the Philippines, and India make them. There was a strike this summer at an Indian steel plant in which the workers were striking for *77 cents an hour*. The steel they made was identical to the steel that's produced in Taiwan, which is now the world's number 2 or 3 steelmaker depending on how you define the numbers.

Our evolution is key to our future in a global economy, an economy in which coalitions of corporations from many countries will compete with other coalitions for research and development, manufacturing, and markets. As a result, the manufacturing capability in the United States is declining as a percentage of the world work force, even though productivity is going up enormously and continues to do so as time goes on. The issues surrounding the "declining middle" are really important. I think we will solve this problem because we are the most innovative societies. However, I'm not quite sure how we going to do it. The issues for us in the education business that relate to "guess who's coming to work" are pretty clear. Most important, we have to look very carefully at the issue of who is entering the work force. I have tried to indicate to you today that America is becoming middle aged, and that if you look at the youth population coming along it is very heavily minority and will continue to be that way. It's heavily made up of poor, "at-risk" children being raised by single females. That situation cries out for some kind of new approach to the issue of educational and vocational equity. That seems to me to be one issue in which a center like yours could have a very important role to play.

QUESTIONS AND ANSWERS

Question: Observing some very recent analyses that we have done there has been a decline in the aspirations and participation of Hispanics to attend college from 1972 and 1980. Do you have any idea as to why this might be?

The question has to do with the fact that the participation rate among Hispanics in higher education has actually been declining. What's the reason for this and is there anything that can be done to try to get Hispanics more into the world of education?

Only about 44 percent of Hispanics now graduate from high school and that's very, very low. That's a major loss to the country. We have discovered in our studies that there is a cultural attitude in many Hispanic families that to leave the family is to be disloyal to the father. If you look at Colorado, you will see able Hispanic kids graduate from high school but not go away to college. They believe they are discrediting their family, and their father particularly, by doing so. There is excellent work going on in states like Colorado to help Hispanics address this issue, to feel good about their families and their values, and also to realize that a certain amount of entrepreneurial skills will be supported at home.

The Hispanic female finds the education issue especially difficult. Few Hispanic females can be persuaded that by doing very well in school, and then going away to college, will improve the status of her family. "If I do really well in school, am I reflecting well on my family or not?" The answer to this question for years has been that you are not supposed to surpass the father, especially if you are a female child. That's beginning to turn around, but it's a very tough situation. I think that Hispanic females are the most undervalued population in terms of the contribution that they could make but don't, because of this conflict between family values and what it is that we would suggest in an educational setting.

Question: Given the statistics you have listed in respect to the increased numbers of Hispanics, Asians, and others, what do you think we ought to do in using bilingualism and English as a second language in our schools? What should be our policy or our strategy?

Probably the hardest question to deal with is that of using bilingualism in teaching, given the increase in persons of limited English proficiency (LEP). If you consider this group as a rich human resource pool, we will get the kind of society we deserve if we educate them well and if they get good jobs. We will have a very different society if we don't.

Bilingualism is, of course, not the way it was in the 1920's. You may recall Leonard Ross's *The Education of Hyman Caplan* (Harcourt, Brace, Jovanovich 1968) and books of that sort that describe how Ms. Midmick and others labored long into the night trying to get Italian immigrants to speak English with relatively little success. Note that Ms. Midnick didn't learn Italian, so our history has not been a bilingual history. This issue 10 years ago was so clear. I thought it made life so

simple in terms of what we in education were to do with LEP individuals. Yet it turns out the realities are much more complicated. I find many minorities themselves equally split on the issue of whether bilingualism is really a good thing or not.

The most optimistic sign that I can see comes from the work of Leo Astrada, who is a demographer at The University of California at Los Angeles. In looking at the Los Angeles Hispanic population, he has discovered that the very young will characteristically say that they speak both languages—English and Spanish—and that people over 65 will say they speak only Spanish. In other words, some of this problem will solve itself as the younger kids learn two languages in the Hispanic culture. At least this is true in Los Angeles. That fact gives us a bit of comfort, but it is still a major social issue. Imagine if Puerto Rico becomes a state. We will have a state in which the legal language of discourse is not English. You can go to various parts of the United States now in which the issue of the language on street signs is one of life and death.

I don't believe that there is any satisfactory Supreme Court decision or congressional legislation that gives us much of a clue about how to proceed on bilingual issues. I can tell you that in Alexandria, Virginia, we have about 600 Taiwanese students in our schools. We have not a single teacher who speaks Taiwanese and we are unlikely to have one. Therefore, in that setting, the chances of bilingualism are nonexistent.

As you look at Asian-Americans I think the answer has to be Ms. Midnick's solution. Those young people will simply have to learn English, and the chances are much better for Asian-American young people to learn English than they are for South Americans Their family culture is simply very different—not any better or worse, just different. I've always been amazed at how Taiwanese, Vietnamese, Chinese, or Japanese families come to the United States with no money and no education and within two generations, their children are at Yale and Princeton, are members of the legislature, and are prospering. It is fine to surpass the father, apparently. No one is caused any guilt by doing well in school. How that happens I don't know, but there is a lot about the family structure of Asian-Americans that is not characteristically present in most Hispanic families. You do have to be very careful to distinguish Puerto Ricans from Cubans and Mexicans because they are very different in terms of their values, their birthrates, their political involvements, and their voting behavior.

Question: What kinds of skills are going to be needed, given the kinds of new jobs that will exist?

I feel that most will not need high level skills in order to get a job because as a janitor, or a truck driver, they simply won't be necessary. However, skills such as the ability to make decisions, to think logically or to communicate clearly are certainly valuable for citizenship. As a matter of fact, if you look at the catalog of the average liberal arts college, what you will see is content quite like that in terms of the things the college tries to do for its people. If we are truly moving into a society that will have more leisure (and we are), then people will have to learn how to use that leisure in a more intelligent way than they have up until this present time. Maybe that's not a bad objective for a school or college given that new dynamic.

After all, we solved one problem in the Great Depression by cutting the work week back from 60 to 40 hours. The work week is in fact now about 33 hours. As we go along, I expect the work week will be cut back a bit more. That leads us to an additional set of important issues. The dual-income family, which is now working very hard, may want to cut back some in work hours, yet doesn't want to lose its economic advantage. That's going to be a difficult dilemma to solve. Maybe we will begin to say to people, "Okay, you are a janitor. You will always be a janitor, given the way the occupational structure is, but you can still go to the Metropolitan Opera and you can still have

certain kinds of other experiences." I don't know. I don't think that is the kind of society we are, but it could go that way.

So, I think the set of issues surrounding how we deal with the balance between training occupation, leisure, and income is an ethical and philosophical question. Also, if I may, let me make one further comment on your point. I work with some companies that have been heavily engaged in automation. As you probably know, the job of draftsperson is being automated through computer-assisted design (CAD). A draftsperson's responsibilities are almost entirely predictable, and anything that is predictable is automatable. However, hotel chains have put millions into the development of an automated maid, and the television pictures of these robots at work are so funny I've seen people lying down on the floor laughing as they watch them. There is no way you can predict what a maid will find when he or she opens the door of the hotel room, including a dead horse found in a hotel bathtub in Cleveland last year. Maids are not going to be automated for many years to come. First of all, we don't pay them much, and second, the job is too complex. Think of a truly robotic maid, one that can walk in to a room and distinguish between a pop top can ring and a wedding ring. That's not the kind of distinction that you can easily get a DOS or CPM program to make, and for that reason, some low-level service jobs will continue to be carried out by people. As another example, I want my garbage collected, I don't want to do it myself, and I will pay the garbage person four times as much as I pay him or her now to have my garbage collected. Service professions that provide assistance we want, but that we don't want to provide ourselves are highly likely to increase in salary quickly. It will be interesting to watch the changes as we become more conscious of the fact that we are a service economy.

Question: I think I understand now what you mean by the liberalization of vocational-technical education, but I'm still not sure what you mean by the professionalism of liberal education.

Many of the liberal arts courses given to undergraduates are really attempts to recruit for majors. Every time I talk to college or university faculty members, they say they are absolutely against advertising. I then talk to the department chairperson and say, "Tell me what you do to make sure that students major in your department." As a dean of 14 years, I remember seeing department chairpersons talking to freshmen and saying, "You don't want to major in English. What kind of job can you ever get with that? Come into chemistry and go with Dupont." They would say this openly.

The liberal arts have been, for all practical purposes, prevocational in nature. The faculty has pushed it that way. There are now over 1,400 different majors in the United States undergraduate education. The brightest students go to graduate school for their professional training. The problem has to do with the degree to which the liberal arts help people acquire those general skills I mentioned before. I think relatively few colleges have looked at how courses and curricula induce those skills. That's the question colleges should tackle directly.

I think it's terrific for people to read Plato. I think it's wonderful that they know about Mozart, but I'm not sure, myself, how those things lead to those abilities, and I'd like to know a lot more about that. We need to know more about the outcomes of the liberal arts, and my feeling is that we also need to move those courses into the adult age range. Those who teach the liberal arts have totally missed the fact that by 1992, half of all college students are going to be 25 years of age or older, and 1 out of 5 is going to be 35 years of age or older. The liberal arts as taught to 18-year-olds is just different than when you teach the same subjects to 40-year-olds. In a service economy, the skills of understanding people, their cultures and motives, and how to diagnose their needs are crucial skills, which perhaps come from the liberal arts.

I have a friend who teaches at Stanford University. He was teaching *Hamlet* this spring and the students just didn't get it. He went over and over it and received no response. These kids, I think, had figured out the job market very well. They wanted to stay at Stanford forever. If there were a 10-year program leading to a degree they would be in it just like that. Anyway, this professor was very frustrated about their responses and he finally said, "Look, let's say you're Hamlet. You go to the university and get your degree, you come home and the following happens. Your girlfriend's crazy, your mother's sleeping with your uncle, and your father's dead. What would you do?" Finally, a student raised his hand in the back and said he would go back for a master's. Such a solution is just not adequate.

I think the liberal arts need to be redefined in terms of the outcomes they seek, and second, they need to be geared to a much older population. I studied *Macbeth* when I was 14 years old, if you can imagine. What did I know at 14 about tragedy? Having been a dean for 14 years, and having been head of a federal agency, now give me a play about lust, greed, murder, and the dark side of humanity, and I'm ready to talk about it.

So, I think the liberal arts are going to have a rebirth, but it won't involve 18-year-olds. More of the 40-year-olds are going to begin coming back to some of those issues. When Yanklovich wrote his book called *New Rules* (Bantam 1982), he was really saying we need those liberal arts of values for a basically middle-aged country.

Question: I'm very concerned about the growing number of high school dropouts entering society. Could you give us your opinion of who you think should be meeting this need, whether it be government, education, or business? What would the best approaches to the problem be?

The question of dropouts and their increasing numbers and the inability of states to provide for these people is a key question that states are dodging. I have polled, as part of a project, every state higher education planning authority in the country to try to find out what they're doing. The first question is: Are you aware of the demographic change in the young people who are coming up through elementary and secondary school? Yes, they are. Next question: What are you doing in terms of new program development to deal with this new generation of people that will have their own promise and their own problems? Answer: Virtually nothing. As long as this is so, it seems to me the dropout becomes even more a net loss because there are no programs currently underway to help them find their way.

The situation does differ in different states. If you look at Colorado, one of the reasons so many people leave school there is that the unemployment rate is about 4 percent. If you want to leave in the 11th grade, you can get a job very rapidly. So as the unemployment rate goes down, ironically enough, the temptation of young people to leave school goes up. You also find that the Graduate Equivalency Diploma (GED) is becoming a major alternative to staying in school for an additional year. The senior year in high school is often terribly dull and many people would rather go out, make $14,000 in that year, and take the GED, because you can study for 2 weekends and pass, and you have the equivalent of a high school diploma. That's becoming an alternate route for many, many young people.

The other answer to your question is that as long as we don't recognize the dropout situation as a social concern, it represents a potential for ill that will hurt us all.

What I've had great difficulty in doing this year is convincing state legislators, particularly, that this issue is important to them and that their own futures depend upon how it is handled. We're

talking about 46 percent of the young people in Texas, for example. It will take a few years to get that point across. The other thing that disturbs me relates back to the comment I made when I started about the people who say that if the percentage of young people graduating from high school is down from 75 percent to 72 percent, that must mean "excellence" is improving. That does bother me. I think it ought to bother all of us.

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